

DLXXI Design Standards

Checklist

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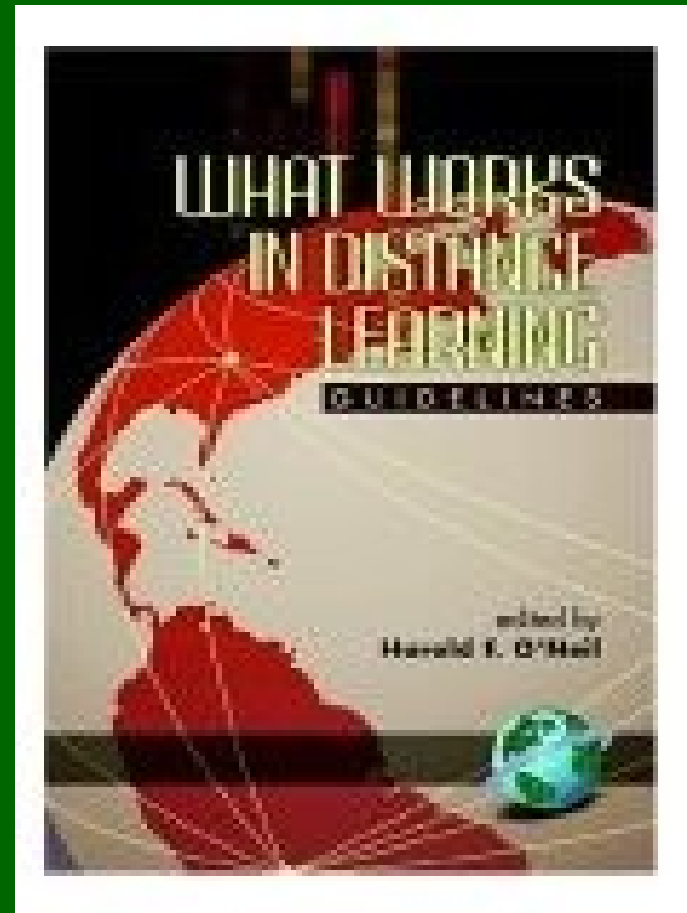


Topics

- Overview of DLXXI Standards Checklist Design
- Five Design Elements in Checklist
 1. Course introductions and objectives
 2. Training methods for four knowledge types
 3. Practice, feedback and assessment
 4. Multimedia design and cognitive load
 5. Contractor staffing requirements

Checklist Design

- Background research on DL learning and motivation funded by Office of Naval Research
- Results put in checklist form



Checklist Objectives

Goals of checklist are to:

1. List research-based DL standards
2. Describe what should be included in the design of ALL DL courses
3. Help you work positively with DL contractors and others who are developing DL courses
4. Increase the learning and transfer from DL courses

Problems we hope to solve

- Need for rapid prototyping of DL courses
- Confusion between information and training (telling is not training)
 - Focus is on information but need evidence-based standards for training methods
 - Information must be translated into knowledge types and taught effectively
 - Assessments are often irrelevant – focused on memory not performance
- Poor results from some courses

1. Course introductions and objectives

- Challenging, doable ELO's & TLO's clearly stated in terms that describe what they will be able to do after training
- The benefit of learning and risk of not
- Overview that relates content to prior knowledge, points out new learning
- Lessons sequenced as job performed or from easy to difficult
- Instructional methods described

2. Training methods for four knowledge types

For three types of knowledge (concepts, processes and principles) does training provide clear definitions, examples and practice?

When teaching “how” (a procedure):

1. Is training based on task analysis;
2. does it provide a complete list of all steps,
3. A mission relevant demonstration,
4. Active, hands on practice and
5. An opportunity to review when mistakes are made?

3. Practice, feedback and assessment

- Part task practice must be followed by whole task practice that mirrors the mission environment
- Practice must be frequent, mirror ELO's and TLO's and start with simple tasks but become increasingly difficult
- Feedback must comment on correct use of strategies or steps and not mention errors – but instead, emphasize the correction of the trainees strategy that produced errors by reviewing relevant sections of the training

3. Practice, feedback and assessment

- Assessment must be aligned with ELO's and TLO's
- Assessment items must ask trainees to apply what they learned in a context that is as close as possible to the mission environment where the skills will be applied
- Do not test for memory (except in rare circumstances), instead assess active, hands on performance of the skill

4. Multimedia design and Cognitive Load

- Use human speech rather than printed text to give information
- Prevent trainee control of everything in DL course - except pacing
 - Do not permit them to get “additional information” or jump around in the course
 - Do not permit “additional exercises” or the selection of “sample tests”

4. Multimedia design and Cognitive Load

- When explaining how something works or how to perform a procedure:
 - Give a summary outlining the main steps
 - Provide a clear, visual demonstration
 - Use pointer words such as “first, second”
- Use visuals not text for examples
- If using visuals (or video) and text (or narration), integrate the two by placing words next to what they describe

5. Contractor staffing requirements

- Contractors are now required to show evidence that they will provide:
 - Instructional designers with masters degree in related field (e.g. Instructional technology or educational psychology) and five years of experience designing technology-based training
 - Professional, experienced subject-matter experts, computer programmers (when required), AV production staff and evaluation experts

5. Contractor staffing requirements

- Contractors are now required to show evidence that they will provide:
 - Two examples of technology-based DL courses they have developed
 - Evidence that their courses reflect the application of research-based learning theory and established principles of instructional design

Questions? Comments?

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